This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-4 (canceled)

1   Claim 5 (original): In a switch having N_{in} input ports
2   applied to K_{in} input shared blocks, a central switching
3   fabric, and N_{out} output ports provided from K_{out} output
4   shared blocks, a method for scheduling packets queued at
5   the input shared blocks for application to the output
6   ports, the method comprising steps of:
7   a)   for each of the input shared blocks, providing a
8   request token associated with one of the output shared
9   blocks, each of the request tokens including an
10   indication based on a number of requested links for
11   the output shared block with which it is associated;
12   b)   for each of the input shared blocks, providing a
13   release token associated with one of the output shared
14   blocks, each of the release tokens including an
15   indication based on a number of released links for the
16   output shared block with which it is associated;
17   c)   for each of one or more reservation time slots
18   within a cell time slot,
19   i)   accepting, by an input shared block, a
20   request token from another input shared block,
21   ii)   determining whether a virtual output queue
22   of the input shared block associated with the
23   output shared block with which the request token
24   is associated, is heavily occupied,
25   iii)   if it is determined that the virtual output
26   queue of the input shared block associated with

2

27	the output shared block with which the request
28	token is associated is heavily occupied, then
29	A) requesting at least one extra link to
30	the output shared block associated with the
31	accepted request token,
32	iv) determining whether the virtual output queue
33	of the input shared block associated with the
34	output shared block with which the request token
35	is associated, is lightly occupied,
36	v) if it is determined that the virtual output
37	queue of the input shared block associated with
38	the output shared block with which the request
39	token is associated is lightly occupied, then
40	A) releasing at least one link to the
41	output shared block associated with the
42	accepted request token if it is indicated
43	that a number of requested links for the
44	output shared block is greater than zero,
45	vi) if it is determined that the virtual output
46	queue of the input shared block associated with
47	the output shared block with which the request
48	token is associated is not lightly occupied, then
49	A) releasing at least one link to the
50	output shared block associated with the
51	accepted request token if the input shared
52	block reserved more than a predetermined
53	number of links and if it is indicated that
54	a number of requested links for the output
55	shared block is greater than zero,
56	vii) accepting, by the input shared block, a
57	release token from another input shared block;

58   viii)   determining whether or not the input

59   shared block can take a link to the output shared

60   block associated with the release token,

61   ix)   if it is determined that the input shared

62   block can take a link to the output shared block

63   associated with the release token, then taking a

64   link from the release token.

1   Claim 6 (original): The method of claim 5 wherein the step
2   of determining whether a virtual output queue of the input
3   shared block associated with the output shared block with
4   which the request token is associated, is heavily occupied,
5   is based on a comparison with a threshold value.

1   Claim 7 (original): The method of claim 5 wherein the step
2   of requesting an extra link to the output shared block
3   associated with the accepted request token, is effected by
4   setting a request indicator corresponding to the input
5   shared block and the output shared block, and incrementing
6   the indication based on the number of links to the output
7   shared block requested.

1   Claim 8 (original): The method of claim 5 wherein the step
2   of determining whether the virtual output queue of the
3   input shared block associated with the output shared block
4   with which the request token is associated, is lightly
5   occupied, is based on a comparison with a threshold value.

1   Claim 9 (original): The method of claim 5 wherein the step
2   of releasing a link to the output shared block associated
3   with the accepted request token is effected by decreasing

4 the indication based on the number of links to the output

5 shared block released.

1 Claim 10 (original): The method of claim 5 wherein the

2 step of determining whether or not the input shared block

3 can take a link to the output shared block associated with

4 the release token, is based on a number of all reserved

5 links by the input shared block and an indication of

6 whether or not the input shared block had requested a link

7 to the output shared block.

1 Claim 11 (original): The method of claim 5 further

2 comprising a step of:

3   d) delivering, by each of the input shared blocks,

4   cells to the central switch fabric based on current

5   indications of a number of link reservations to each

6   of the output shared blocks, at the end of a cell time

7   slot.

1 Claim 12 (original): In a switch having N_{in} input ports

2 applied to K_{in} input shared blocks, a central switching

3 fabric, and N_{out} output ports provided from K_{out} output

4 shared blocks, a method for scheduling packets queued at

5 the input shared blocks for application to the output

6 ports, the method comprising steps of:

7   a)   for each of the input shared blocks, providing a

8   request token associated with one of the output shared

9   blocks, each of the request tokens including an

10   indication based on a number of requested links for

11   the output shared block with which it is associated;

12   b)   for each of the input shared blocks, providing a

13   release token associated with one of the output shared

14   blocks, each of the release tokens including an

15   indication based on a number of released links for the

16   output shared block with which it is associated;

17   c)   for each of one or more reservation time slots

18   within a cell time slot,

19   i)   accepting, by an input shared block, a

20   request token from an another input shared block,

21   ii)   determining whether a virtual output queue

22   of the input shared block associated with the

23   output shared block with which the request token

24   is associated, is heavily occupied,

25   iii)   if it is determined that the virtual output

26   queue of the input shared block associated with

27   the output shared block with which the request

28   token is associated is heavily occupied, then

29   A)   requesting at least one extra link to

30   the output shared block associated with the

31   accepted request token,

32   iv)   determining whether the virtual output queue

33   of the input shared block associated with the

34   output shared block with which the request token

35   is associated, is lightly occupied,

36   v)   if it is determined that the virtual output

37   queue of the input shared block associated with

38   the output shared block with which the request

39   token is associated is lightly occupied, then

40   A)   releasing at least one link to the

41   output shared block associated with the

42   accepted request token if it is indicated

43   that a number of requested links for the

44   output shared block is greater than zero,

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45	vi) if it is determined that the virtual output
46	queue of the input shared block associated with
47	the output shared block with which the request
48	token is associated is not lightly occupied, then
49	A) releasing at least one link to the
50	output shared block associated with the
51	accepted request token if the input shared
52	block reserved more than a predetermined
53	number of links,
54	vii) accepting, by the input shared block, a
55	release token from another input shared block,
56	viii) determining whether to release at least
57	one link to the output shared block with which
58	the accepted release token is associated based on
59	a queue occupancy, a number of links reserved,
60	and a predetermined number of links
61	ix) if it has been determined to release a link
62	to the output shared block with which the
63	accepted release token is associated, releasing a
64	link,
65	x) determining whether or not to take at least
66	one released link to the output shared block with
67	which the accepted release token is associated
68	based on queue occupancy, a number of links
69	reserved, and a number of links between the input
70	shared block and the central switch fabric, and
71	xi) if it is determined to take at least one
72	released link to the output shared block with
73	which the accepted release token is associated,
74	taking at least one link.

1 Claim 13 (original): The method of claim 12 wherein the
2 step of determining whether a virtual output queue of the
3 input shared block associated with the output shared block
4 with which the request token is associated, is heavily
5 occupied, is based on a comparison with a threshold value.

1 Claim 14 (original): The method of claim 12 wherein the
2 step of requesting at least one extra link to the output
3 shared block associated with the accepted request token, is
4 effected by setting a request indicator corresponding to
5 the input shared block and the output shared block, and
6 incrementing the indication based on the number of links to
7 the output shared block requested.

1 Claim 15 (original): The method of claim 12 wherein the
2 step of determining whether the virtual output queue of the
3 input shared block associated with the output shared block
4 with which the request token is associated, is lightly
5 occupied, is based on a comparison with a threshold value.

1 Claim 16 (original): The method of claim 12 wherein the
2 step of releasing at least one link to the output shared
3 block associated with the accepted request token is
4 effected by decreasing the indication based on the number
5 of links to the output shared block released.

1 Claim 17 (original): The method of claim 12 wherein the
2 step of determining whether or not the input shared block
3 can take at least one link to the output shared block
4 associated with the release token, is based on a queue
5 occupancy of a virtual output queue, and a number of all
6 reserved links by the input shared block and an indication

7   of whether or not the input shared block had requested at

8   least one link to the output shared block if it is

9   indicated that a number of released links for the output

10 shared block is greater than zero.

1   Claim 18 (original): The method of claim 12 further

2   comprising a step of:

3   d) delivering, by each of the input shared blocks,

4   cells to the central switch fabric base based on

5   current indications of a number of link reservations

6   to each of the output shared blocks, at the end of a

7   cell time slot.

1   Claim 19 (original): A switch for switching packets

2   arriving at a number of input ports to an appropriate one

3   of a number of output ports, the switch comprising:

4   a) a central switching fabric;

5   b) output shared blocks, each coupled with at least

6   one output port;

7   c) links between the central switch fabric and each

8   of the output shared blocks

9   d) input shared blocks, each

10   i) coupled with at least one input port,

11   ii) having virtual output queues, each of the

12   virtual output queues corresponding to one or

13   more output ports,

14   iii) storing

15   A) an indication of whether at least one

16   links to each of the output shared blocks

17   has been requested,

18   B)   an indication based on a number of links

19   to each of the output shared blocks

20   released, and

21   C)   an indication based on a number of links

22   reserved to each of the output shared

23   blocks;

24 e)   request tokens, each associated with a particular

25   one of the output shared blocks and each indicating a

26   number of requests for links to the associated one of

27   the output shared blocks;

28 f)   release tokens, each associated with a particular

29   one of the output shared blocks and each indicating a

30   number of released links to the associated one of the

31   output shared blocks; and

32 g)   links between the central switch fabric and each

33   of the input shared blocks.

1   Claim 20 (original): The switch of claim 19 wherein each

2   of the input shared blocks holds at least one of the

3   request tokens and at least one of the release tokens

4   during a reservation time slot.